IN THE SPECIFICATION:

Kindly replace the following paragraph, to correct a scanning error. The paragraph appears on page 3 of the Application as filed, and is designated ¶ 15 in the published Application.

FIG. 1 shows, in simplified block diagram form, one embodiment of the invention. Specifically, shown is optical light source 101 typically including a continuous wave or pulsed laser to generate an optical signal at a desired wavelength. Exemplary optical signals to be processed have optical frequencies of about ~~$2.3x10^4$ Hertz~~ $2.3x10^{14}$ Hertz to about $1.8x10^{14}$ Hertz, i.e., a wavelength of about 1.3 microns to about 1.7 microns. In one example, a continuous wave optical signal having a wavelength of approximately 1.55 microns, i.e., a frequency of $1.93 \, x10^{14}$ Hertz, is generated by light source 101 and supplied via 102 to optical digital-to-analog converter 100. In optical digital-to-analog converter 100 the continuous wave optical signal is supplied via optical path 103 to splitter 104, which generates a plurality of N mutually coherent optical beams 105-1 through 105-N. The number N of the mutually coherent beams has to be at least two (2), but four (4) to eight (8) optical beams are typically employed. The importance of the plurality N of optical beams being mutually coherent in this application will be discussed below. In this example, splitter 104 is a multimode interference (MMI) coupler. The plurality N of mutually coherent optical beams are supplied on a one-to-one basis to a corresponding plurality of optical phase shifters 106-1 through 106-N, respectively. Also supplied via 112-1 through 112-N to phase shifters 106-1 through 106-N are bits, i.e., control signals, of a data sequence for causing the phase shifts in phase shifters 106-1 through 106-N to effect the desired digital-to-analog conversion. Thus, in this example, the digital-to-analog conversion is realized by use of an electro-optical phase shift modulation scheme through either direct phase shift modulation of the continuous wave optical beams from laser 101 or by an external phase shift modulation using, for example, a Mach Zehnder phase shift modulator. The frequency of the modulation signal is in the microwave/millimeter-wave range. The phase shift modulated outputs from phase shifters 106-1 through 106-N are supplied via optical paths 107-1 through 107-N, respectively, to optical combiner 108, where they are recombined to form the desired optical analog signal. In this example, combiner 108 is a multimode interference (MMI) coupler. This analog

optical signal is supplied via optical paths 109 and 110 to linear photodiode 111, which yields an electrical signal for use as desired.

Kindly replace the following paragraph, to correct a typographical error. The paragraph appears on page 4 of the Application as filed, and is designated ¶ 16 in the published Application.

The recombined phase shift modulated optical signal being detected by photodiode 111 ~~developes~~ develops current i_{PD} through photodiode 111 which is calculated as follows:

$$\cancel{i_{PD} = RP_m \left| \sum_i \exp\left(j\pi \frac{V_i}{V_\pi} \right) \right|^2},$$

$$i_{PD} = RP_{in} \left| \sum_i \exp\left(j\pi \frac{V_i}{V_\pi} \right) \right|^2,$$

Kindly replace the following paragraph, to correct a typographical error. The paragraph appears on page 6 of the Application as filed, and is designated ¶ 22 in the published Application.

The recombined phase shift modulated optical signal being detected by photodiode 111 ~~developes~~ develops current i_{PD} through photodiode 111, which is calculated as follows:

$$\cancel{i_{PD} = RP_m \prod_j \left| \sum_i \exp\left(j\pi \frac{V_{i,j}}{V_\pi} \right) \right|^2},$$

$$i_{PD} = RP_{in} \prod_j \left| \sum_i \exp\left(j\pi \frac{V_{i,j}}{V_\pi} \right) \right|^2,$$
